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**Patent** [19]

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**[54] PHOTOCATALYST CARTRIDGE**

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[51] Int. CL<sup>6</sup> B01J03502 ; B01J02106; B01J03506; C02F00132; C02F00158**[57] ABSTRACT**

**PROBLEM TO BE SOLVED:** To extend the area in contact with a fluid to be treated of a photocatalyst cartridge decomposing an org. matter, etc., in a liq. or a gas and to improve reaction efficiency by alternately laminating a photocatalyst carrier in which the photocatalyst is deposited on a porous body and a space retaining material in multistage along a flow direction of the fluid to be treated.

**SOLUTION:** This cartridge housed in a reaction vessel and in which a UV lamp is disposed at its center part so as to allow to irradiate UV rays is constituted by alternately laminating the photocatalyst carrier 5a in which the photocatalyst is deposited on the porous body and a space retaining material 5b in multistage along the flow direction of the fluid to be treated, and the photocatalyst carrier 5a and the space retaining material 5b are incorporated with a frame body 5c made of acrylic resin so that multistage passing surfaces are formed. A woven fabric or a nonwoven fabric are used as the photocatalyst carrier 5a, and a glass cloth, Kevlar fiber, etc., are used as the material therefor. A filter 5d is provided at one side of the cartridge to filter litters contained in the fluid to be treated.

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